



Chapter 1

Summary

INTRODUCTION

The City of Beaverton has not recently undertaken a thorough review of its transportation system. Transportation issues in the City of Beaverton were last addressed, via objectives and policies in the Transportation Element of the Comprehensive Plan in 1988. Since that time, Beaverton has grown significantly and the adoption of the *Transportation Planning Rule* statewide in May, 1991 mandates comprehensive transportation planning for cities in Oregon. To meet these needs, this Transportation System Plan has been prepared. Its aim is to fulfill the state mandate (Goal 12) for comprehensive planning in Beaverton, to address current problem areas, to look into the future to identify the needs created by growth and to provide guidelines for neighborhood traffic planning in the future.

The Transportation System Plan (TSP) provides specific information regarding transportation needs to guide future transportation investment in the City and determine how land use and transportation decisions can be brought together beneficially for the City. This plan is intended to be consistent with other jurisdictional plans including Metro's *Regional Transportation Plan (RTP)*, Washington County's *Transportation Plan and Bicycle Plan*, and ODOT's *Oregon Transportation Plan (OTP)*.

After several months of extensive engineering and planning analysis, the draft Transportation System Plan has been prepared for public review. The plan process began with the involvement of the public (through the City of Beaverton Traffic Commission comprised of Beaverton citizens) and will continue with the public providing key perspectives on the vision for transportation in Beaverton through review of the **DRAFT Transportation System Plan**.

Plan Process

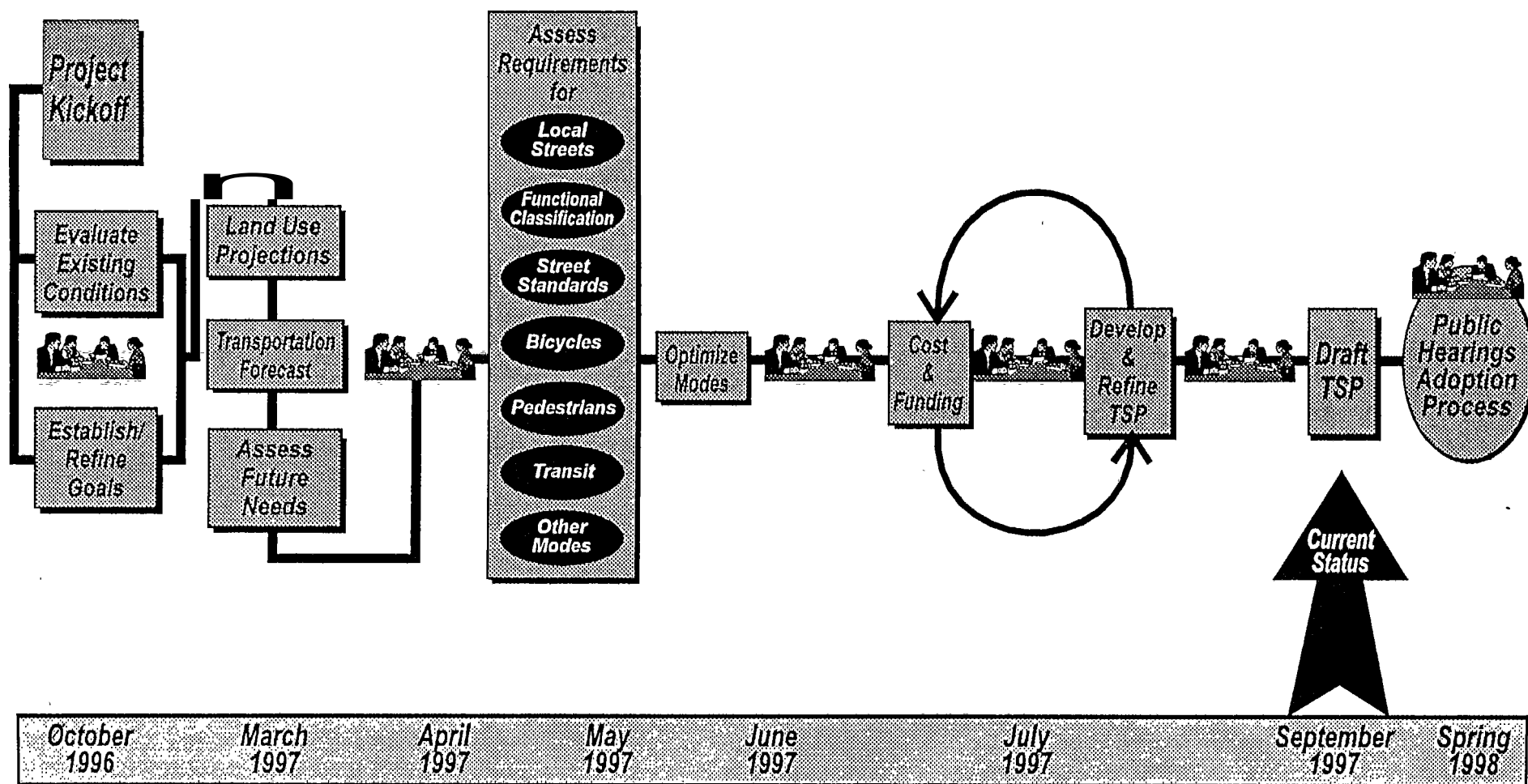
The Beaverton Transportation System Plan process/timeline is summarized in Figure 1-1, and includes the following elements:

- Inventory/Data Collection
- Evaluate Existing Conditions and Needs Travel Forecasting Needs
- Determine Needs by Mode
- Develop Improvements to Mitigate Deficiencies by Mode
- Cost Estimates of Improvement
- Action Plan
- Draft TSP

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**Figure 1-1
TSP Work Approach**



The transportation system was broken into five basic modes (or mode groups):

- Pedestrians
- Bicycles
- Transit
- Motor Vehicles
- Other Modes (Including Rail, Air, Water, Pipeline, etc.)

The TSP planning objective was to optimize each of these modes of transportation within Beaverton. The following sections summarize the findings of the Transportation System Plan technical studies. Specific chapters of this report address TSP Goals and Policies (Chapter 2), Existing Conditions (Chapter 3), Future Demand and Land Use (Chapter 4), Pedestrians (Chapter 5), Bicycles (Chapter 6), Transit (Chapter 7), Motor Vehicles (Chapter 8), Other Modes (Chapter 9), Transportation Demand Management (Chapter 10) and Costs/Phasing (Chapter 11).

Several City of Beaverton Traffic Commission meetings and TSP Technical Advisory Committee (TAC) meetings were held over the course of the study. The Traffic Commission addressed goals and policies related to transportation in Beaverton, transportation needs by mode (motor vehicles, bicycle, pedestrian, transit, other modes, etc.), strategies for choosing alternatives, and review of transportation alternatives. The TAC addressed technical issues and coordination with adjacent and other jurisdictions. The TAC topics included land use issues, travel demand forecasting issues, goals and policies and coordination with adjacent jurisdictions.

Preface

As a starting point for this plan, a few of the commonly asked questions have been outlined to provide an understanding of what this plan is and why it is being updated now.

Why do a transportation system plan?

There are two basic reasons for updating the City's current transportation plan. First, it is required by Oregon State law. Statewide Planning Goal **12**, Transportation, requires that all Oregon communities prepare a transportation plan to address existing and future access and circulation needs of the community. The adopted Transportation Planning Rule (May 1991, and updated April 1995) further defines the specific requirements for a transportation system plan.

A second reason for preparing a transportation plan is that it makes good sense. Just as with family financial planning, transportation planning allows a community to look at its present and future needs and develop strategies to address those needs for the quality of environment it desires. It is a road map to good, well thought out transportation investment within Beaverton. The plan can help avoid building unneeded, redundant or unwanted public infrastructure and assist officials in making short term decisions, which do not contradict future needs, and thus reducing costs in the long run.

What is a transportation system plan?

A transportation system plan establishes the City's goals in developing its transportation facilities for both the short and long term. It identifies existing and future facility needs and the improvements necessary to address them. The transportation plan can be developed in components, such as a Trails Plan, an Airport Master Plan, a Transit Plan and a Streets Plan. In Beaverton, Pedestrian, Bicycle, Transit, Motor Vehicles and Other Modes (Air, Rail, Water, Pipelines, etc.) are all incorporated into the Transportation System Plan, although other plans may address each mode in a more detailed manner (i.e. Beaverton Downtown Connectivity Plan completed in 1996). Basically, the TSP is a master plan to guide decision making in Beaverton and focus future evaluation of transportation facilities within a community context. Further detailed project specific or corridor studies will be Undertaken as implementing actions of the TSP.

Why do the plan now?

Periodic review of the City's Comprehensive Plan is required every 4 to 10 years (House Bill 2150). The Transportation System Plan is an approved work task in the City's current Periodic Review Work Program. It is timely and important to complete the updated Transportation System Plan and adopt it this year. Metro will complete the Portland region's TSP (which is called the Regional Transportation Plan - RTP) next year and all cities are required to have a local TSP in place within 12 months of the adoption of Metro's RTP. In planning for regional growth, Beaverton must identify the transportation needs associated with accommodating over 30,000 additional households and 60,000 new employees by the year 2015.

How can I continue to make my concerns known?

Public review of the draft Transportation System Plan and public hearings (Traffic Commission and Planning Commission) will provide the forum for continued public comment as the plan heads toward adoption.

GOALS AND POLICIES

Background

The City of Beaverton Draft TSP Goals and Policies consist of seven goals with related policies organized under each goal. Goals were developed which should reflect community needs and values for many years. The goals are simple, brief guiding statements which describe a desired end state. The policies focus on how goals will be met by describing the types of action that will contribute to achieving the goal. Policies may change as time goes on and would be the focus of any plan update (generally 5 to 10 years.) Input and comments received from the Beaverton Traffic Commission, the Beaverton TSP Technical Advisory Committee and Beaverton staff have been incorporated into this draft. The existing City of Beaverton Objectives and Policies in the Transportation Element of the

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Comprehensive Plan have been incorporated into these Goals and Policies, reflecting other regional policy from the state, region and adjacent jurisdictions.

The policies are provided in this summary with background information and further explanation in Chapter 2. The Draft TSP Goals and Policies are linked to mode maps provided in the City of Beaverton TSP. The TSP will include master plan maps for motor vehicles, pedestrians, bicycles, transit and other modes.

Goal 1. Transportation facilities designed and constructed in a manner to enhance Beaverton's livability.

1. Maintain the livability of Beaverton through proper location and design of transportation facilities.
2. Consider noise attenuation in the design (including redesign and reconstruction) of arterial streets immediately adjacent to residential development.
3. Locate and design recreation/bicycle pathways so as to balance the needs of human use and enjoyment with resource preservation in areas identified for their Significant Natural Resource values.
4. Meet the appropriate requirements of state and federal resource agencies for wetlands or stream corridors in development of City transportation facilities.
5. Protect neighborhoods from excessive through traffic and travel speeds while providing reasonable access to and from residential areas. Build local, neighborhood and collector streets to minimize speeding.
6. Require new commercial development to identify traffic plans for residential streets where increased cut-through traffic may occur.

Goal 2. A balanced transportation system.

1. Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use and recognize these streets as important to community identity as well as providing a needed service.
2. Provide connectivity to each area of the City for convenient multi-modal access.
3. Develop a safe, complete, attractive and efficient system of pedestrian ways and bicycle ways, including bike lanes, shared roadways, off-street pathways and sidewalks according to the pedestrian and bicycle system maps.

4. Design arterial and collector streets to accommodate pads for public transit.
5. When development or redevelopment of land occurs, provide bike and pedestrian facilities that are consistent with standards and policies of this plan.

Goal 3. A safe transportation system.

1. Improve traffic safety through a comprehensive program of engineering, education and enforcement.
2. Design streets to serve their anticipated function and intended uses as determined by the comprehensive plan.
3. Enhance safety by prioritizing and mitigating high accident locations within the City.
4. Establish rights-of-way at the time of site development and officially secure them by dedication of property.
5. Designate routes to schools for each school and any new residential project.
6. Construct pathways only where they can be developed with satisfactory design components that address safety, security, maintainability and acceptable pathway use.
7. Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics and the credibility of the system as a whole.
8. Maintain access management standards for arterial and collector roadways consistent with City, County and State requirements to reduce conflicts between vehicles and trucks, as well as conflicts between vehicles and pedestrians.
9. Ensure adequate access for emergency services vehicles is provided throughout the City.

Goal 4. An efficient transportation system that reduces the number of trips and limits congestion.

1. Support trip reduction strategies developed regionally, including employment, tourist and recreational trip programs.
2. Limit the provision of parking to meet regional and state standards.

3. Maintain level of service consistent with regional goals. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems and signal synchronization.
4. Plan land uses to increase opportunities for multi-purpose trips (trip chaining).
5. Require land use approval for proposals for new or improved transportation facilities including identification of potential impacts.
6. Support mixed-use development.
7. Improve local transit services to increase transit ridership potential.
8. Encourage development of regional high capacity transit, including light rail transit and commuter rail.

Goal 5. Transportation facilities which are accessible to all members of the community and reduce trip length.

1. Construct transportation facilities to meet the requirements of the Americans with Disabilities Act.
2. Develop neighborhood and local connections to provide adequate circulation in and out of the neighborhoods.

Goal 6. Transportation facilities which provide efficient movement of goods.

1. Designated arterial routes and freeway access areas in Beaverton are essential for efficient movement of goods; design these facilities and adjacent land uses to reflect the needs of goods movement.
2. Consider grade separation or gate control for all primary railroad crossings of arterial streets.
3. Meet federal and state safety compliance standards for operation, construction and maintenance of rail system.
4. Consider existing railroad and air transportation facilities to be City resources and reflect the needs of these facilities in land use decisions.
5. Provide safe routing of hazardous materials consistent with federal guidelines and provide for public involvement in the process.

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<p>Goal 7. Implement the transportation plan by working cooperatively with federal, regional and local governments, private sector and citizens and by creating a stable, flexible financial system.</p>

1. Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Washington County, ODOT, Tri-Met and Metro as well as adjacent cities (Tigard, Hillsboro and Portland.)
2. Participate in regional growth management policy and work with regional agencies to assure adequate funding of transportation facilities to support those policies.
3. Work with Tri-Met to encourage the development of transit improvements.
4. Monitor and update the transportation element of the comprehensive plan so that issues and opportunities related to change are resolved in a timely manner. Develop and update an annual capital improvements program which establishes the construction and improvement priorities of the City and allocates the appropriate level of funding.
5. Utilize the *System Traffic Impact Fee* as an element of an overall funding program to pay for adding capacity to the collector and arterial street system and make safety improvements caused by increased land use development.
6. Develop a long-range financial strategy to make needed improvements in the transportation system and support operational and maintenance requirements.

Recommendations

Optimal modal plans have been developed for each mode of transportation used in Beaverton including bicycles, pedestrians, transit, motor vehicles and other modes (i.e., air, water, rail, pipeline). A master plan, showing long range priorities for each mode, and an action plan, showing modal priorities for routes in the City, were developed for each mode of transportation with the exception of trucks and transit. The master plan summarizes projects which are desirable to complete the modal network in Beaverton and should be pursued as opportunities arise through development or other means. The action plan consists of projects which would be the steps or building blocks needed to implement the intent of the modal master plan. These projects should become priorities for Beaverton to pursue, either through development, state, county or City funding. Action plan projects generally complete key links in the modal networks or serve highly used locations. Modal summaries are generally two to ten page elements that have summary text, master plan graphic, action plan list and action plan graphic.

PEDESTRIANS

Sidewalks are provided on many of the arterial and collector roadways and along many of the newer local streets and roadways in the City of Beaverton, forming an existing pedestrian network. However, there are several gaps in the existing network where the sidewalks are discontinuous along a segment of roadway. These gaps significantly impact the potential for pedestrian circulation. Generally, where sidewalks are available, there is sufficient capacity. In other words, it is much more important that a continuous sidewalk be available than that it be of a certain size or type.

The most important existing pedestrian need in Beaverton is an interconnecting system of walkways within a half mile grid and connectivity to light rail transit (LRT) stations and key activity centers in Beaverton (parks, schools, retail, etc.). Needs include safe, convenient crossings of large arterial streets which act as barriers to pedestrian movement. In the future, pedestrian needs will be similar in the City, but there will be additional activity centers that will need to be considered and interconnected.

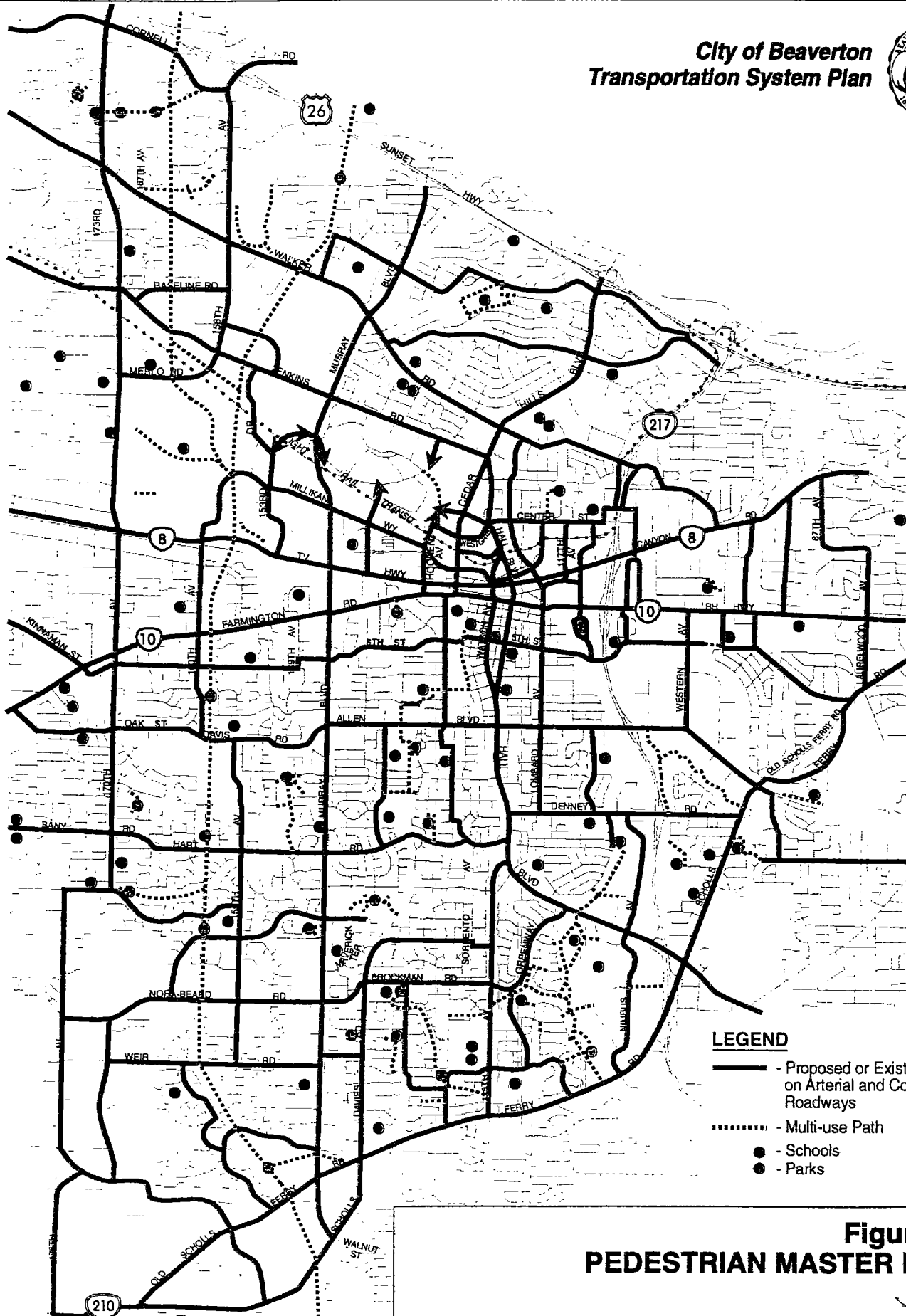
The Beaverton Traffic Commission evaluated various strategies and then ranked them. Each Traffic Commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her vision of priorities for the City of Beaverton. The ranking of these strategies follows from most important to least important¹:

- Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some sidewalks exist
- Pedestrian corridors to transit stations and stops
- Signalized pedestrian crossings
- Pedestrian corridors that connect neighborhoods
- One-sided to two-sided sidewalks
- As development occurs, construction of sidewalks by developers
- Pedestrian corridors that commuters might use
- Reconstruct all existing substandard sidewalks to City of Beaverton Standards

The Pedestrian Master Plan (Figure 1-2) is an overall plan and summarizes the desired framework plan to meet local and regional policy. From this Master Plan, a more specific, shorter-term Action Plan was developed. The Action Plan reflects the priority of strategies from the Traffic Commission and public participants. The Action Plan (Table 1-1 and Figure 1-3) consists of projects that the City should give priority to when funding becomes available. As development occurs, streets are rebuilt and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well.

¹ Appendix H contains overall scoring

**City of Beaverton
Transportation System Plan**



LEGEND

- Proposed or Existing Sidewalks on Arterial and Collector Roadways
- Multi-use Path
- Schools
- Parks

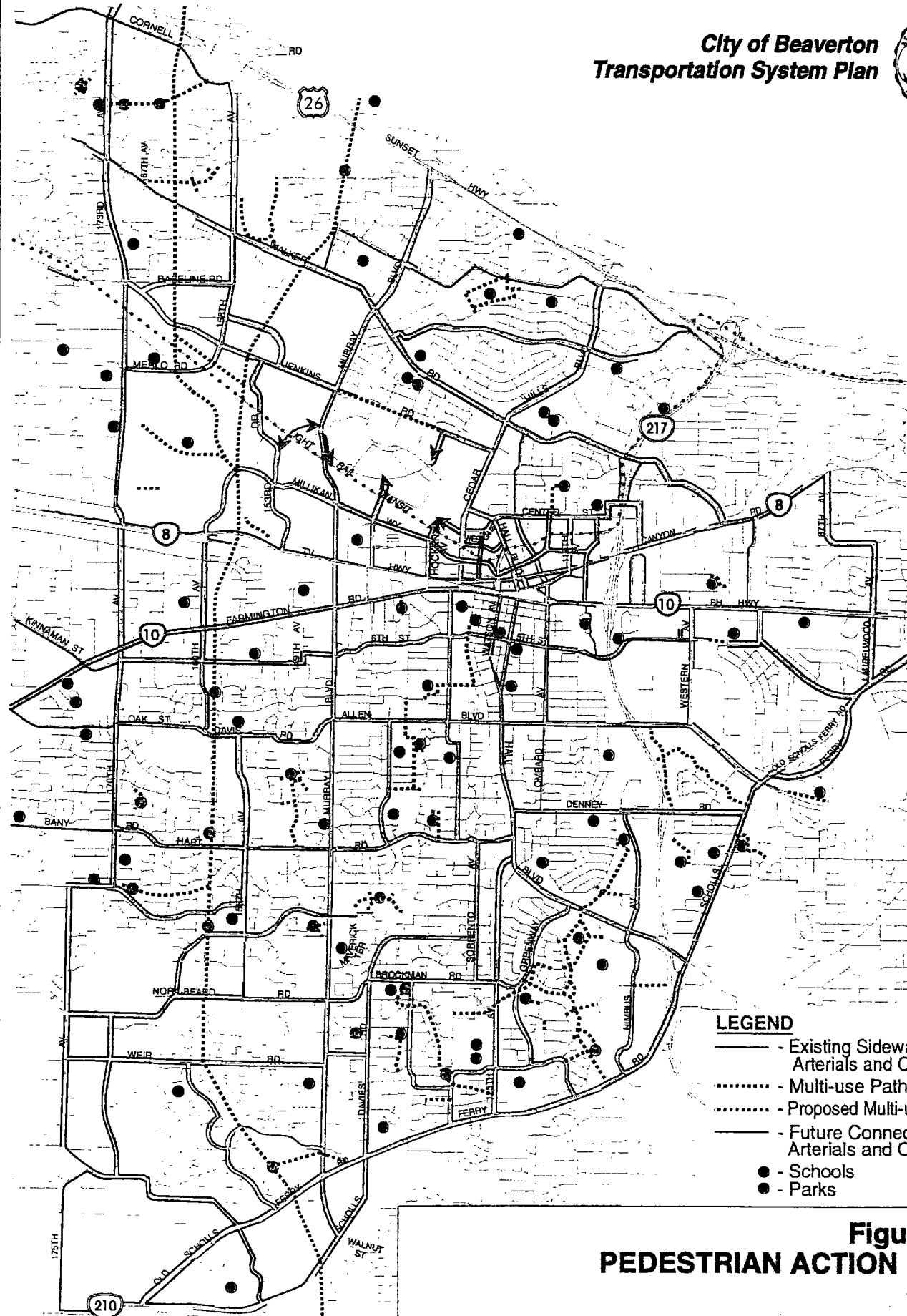
**Figure 1-2
PEDESTRIAN MASTER PLAN**

Table 1-1
Pedestrian Action Plan Project Priorities

Project	From	To	Approximate Cost (\$1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
155 th Avenue	Davies Road	Nora-Beard Road	357
Priority: Fill in gaps in pedestrian network			
Farmington Road/B-H Highway	Hocken Avenue	Erickson Avenue	42
Beaverton-Hillsdale Hwy (north side)	91 st Avenue	Laurelwood Avenue	64
TV Highway/Canyon Road (gaps on one-side)	170 th Avenue	87 th Avenue	323
158 th Avenue (east side)	Blue Ridge Drive	approx 500 ft south	30
Cedar Hills Boulevard (west side)	Walker Road	Park Way	87
Cedar Hills Boulevard	Park Way	Butner Road	90
Murray Boulevard	11 th Road	Millikan Way	270
Denney 1	Nimbus	Scholls Ferry Road	210
Allen Boulevard (gaps)	Western Avenue	Scholls Ferry Road	60
Western Avenue	5 th Street	800 feet south of 5	48
5th Street (south side)	Alger Avenue	Western Avenue	117
6 th Street/Division Street	Murray Boulevard	170 th Avenue	318
Davies Road (east side)	Scholls Ferry Road	Hiteon Drive	66
Scholls Ferry Road/Old Scholls Ferry Road (gaps)	Scholls/Old Scholls (west end)	Beaverton-Hillsdale Highway	1,650
SW Park Way (gaps)	Walker Road	ORE 217	186
110 th Avenue (gap-one side)	Beaverton-Hillsdale Hwy	Canyon Road	30
Priority: Pedestrian corridors to transit stations and stops			
153 rd Drive	Jenkins Road	Light Rail Transit	114
Connection Roadway	153 rd Avenue	Murray Boulevard	84
Millikan Way	Murray Boulevard	Hocken Avenue	180
160 th Avenue	TV Highway	Davis Road	312
117 th Avenue	Light Rail Transit	Center Street	30
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110 th Avenue/ Cabot Street	900
Lombard Avenue	Center Street	Beaverdam Road	60
Jay Street	158 th Avenue	Jenkins Road	126
Priority: Construct sidewalks with roadway improvement projects			
125 th Avenue	Hill Boulevard	Brockman Road	168
Farmington Road	Murray Boulevard	172 nd Avenue	346
Farmington Road	172 nd Avenue	185 th Avenue	190
Nimbus Avenue	Denney Road	Cirrus Drive	120
Walker Road	ORE 217	Canyon Road	182
Walker Road (gaps)	173 rd Avenue	Mayfield Avenue	384
Davies Road	Old Scholls Ferry Road	Scholls Ferry Road	53
Murray Boulevard	Old Scholls Ferry Road	Scholls Ferry Road	96
Millikan Way	Hocken Avenue	Cedar Hills Blvd	50
170 th Avenue	Rigert Road	Alexander Street	449
170 th Avenue	Alexander Street	Baseline/Jenkins	319

Project	From	To	Approximate Cost (\$1000's dollars)
170 th /173 rd Avenue	Baseline/Jenkins Road	Walker Road	192
173 rd Avenue	Walker Road	Cornell Road	206
173 rd Avenue	Cornell Road	Bronson Road	48
Hart Road/Bany Road (gaps)	Murray Boulevard	170 th Avenue	206
Hart Road (gaps)	Hall Boulevard	Murray Boulevard	43
Cornell Road (one-side)	158 th Avenue	185 th Avenue	144
Baseline Road	158 th Avenue	166 th Avenue	96
Oak Street/Davis Road/Allen (gaps)	Murray Boulevard	170 th Avenue	144
Allen Boulevard (gaps)	Alice Lane	Western Avenue	98
Nora-Beard Road	175 th Avenue	155 th Avenue	245
Weir Road	175 th Avenue	160 th Avenue	216
175 th Avenue-Rigert Road	170 th Avenue	ORE 210	658
Merlo Road/158 th Avenue (gaps)	Jay Street	Walker Road	53
Jenkins Road	153 rd Avenue	Murray Boulevard	98
Hart Road/Bany Road	170 th Avenue	185 th Avenue	187
SW Beaverton collector roadway	Scholls Ferry Road	175 th Avenue	302
SW Beaverton circulation roadway	High Hill Lane	Nora-Beard Road	240
<i>Priority: Pedestrian corridors that connect neighborhoods</i>			
SW Butner Road (one side)	Murray Boulevard	Park Way	258
SW Downing Road (gaps on south side)	Murray Boulevard	Meadow Drive	36
Meadow Drive (one side)	Downing Road	Walker Road	33
Laurelwood Avenue/87 th Avenue	Canyon Road	Scholls Ferry Road	378
Jamieson Road	Pinehurst Drive/Cypress	Scholls Ferry Road	180
Cypress Street	Jamieson Road	Elm Avenue	69
Sexton Mountain Drive (gaps)	Maverick Terrace	Nora-Beard Road	258
96 th Avenue (one side)	Canyon Road	Beaverton-Hillsdale Highway	78
Pedestrian Action Plan Projects Total Cost:			\$ 12,583

City of Beaverton Transportation System Plan



**Figure 1-3
PEDESTRIAN ACTION PLAN**

BICYCLES

Bikeways are currently provided on some of the arterial and collector roadways in the City of Beaverton, forming a bikeway network. Bikeways generally consist of designated bike lanes and segments where specific accommodation has been made for bicyclists. However, there are many gaps in the bicycle network where bikeways do not exist along arterial and collector roadways. Continuity and connectivity are key issues for bicyclists and gaps in the bikeway network cause the most significant problems for bicyclists.

The ranking of the bicycle strategies evaluated by the Traffic Commission and public participants follows, from most important to least important?

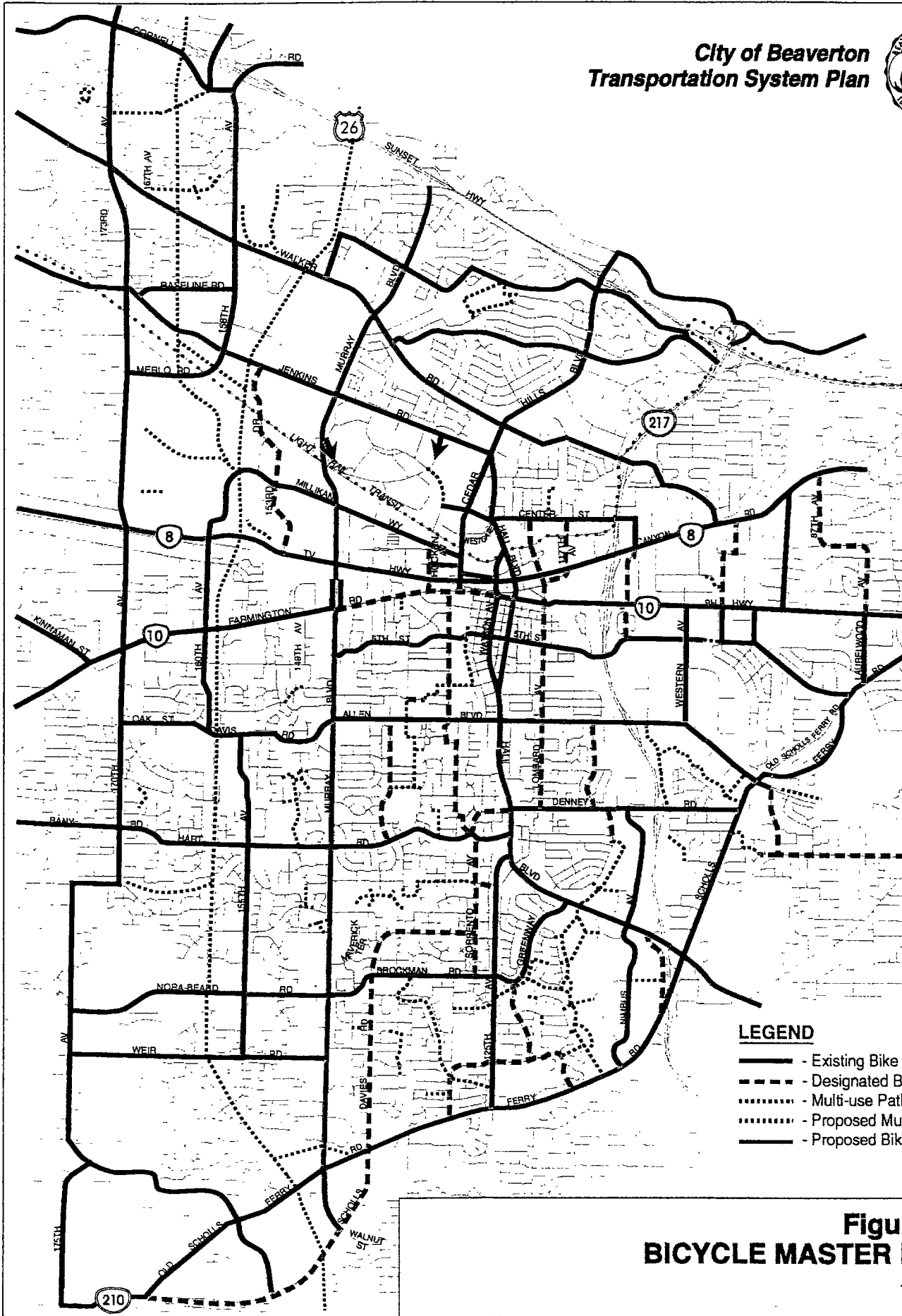
- Connect key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some segments of bikeways exist
- Bicycle corridors that connect neighborhoods
- Construct bike lanes with roadway improvement projects
- Bicycle corridors that commuters might use
- Bicycle corridors providing mobility to and within commercial areas

The Bicycle Master Plan (Figure 1-4) outlines where bicycle facilities will be required in the future. It builds from the state policy from the Transportation Planning Rule that all arterial and collector roads have bike lanes. Additional linkages with lanes or accommodations are outlined to make a complete network. The Bicycle Action Plan (Figure 1-5 and Table 1-2) consists of projects that the City should actively try to fund in the next ten years. With the action plan, a substantial bicycle network would be in place and would allow attention to move toward infill Master Plan projects. The Action Plan is consistent with plans developed by Metro, Washington County and the State.³ The bicycle plan will require incremental implementation. As development occurs, streets are rebuilt and other project funding opportunities (such as grant programs) arise, projects on the Master Plan should be integrated into project development. Many of the projects would be elements of multi-modal street improvement projects (i.e. Murray Boulevard extension). The City, through its Capital Improvement Program, joint finding with other agencies (County, Metro and State) and development approval would implement these projects.

² The overall scoring is included in the appendix

³ *Draft 1995 Interim Federal Regional Transportation Plan, April 1995*, Metro and Draft Bikeway Plan, Washington County, Oregon, June, 1995.

**City of Beaverton
Transportation System Plan**

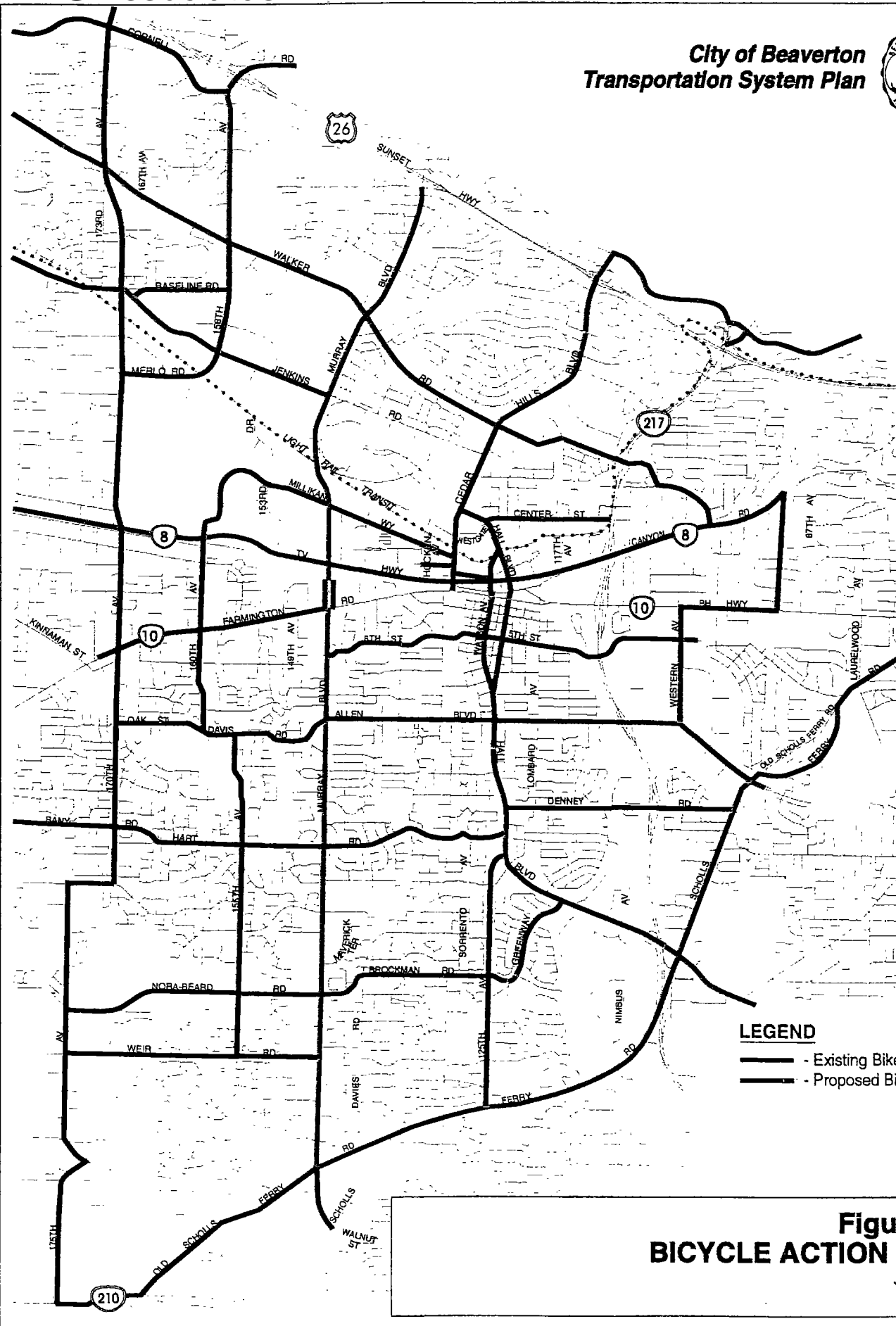


LEGEND

- Existing Bike Lanes
- - - Designated Bikeway
- Multi-use Path
- . - . - Proposed Multi-use Path
- - - - - Proposed Bike Lanes

**Figure 1-4
BICYCLE MASTER PLAN**

**City of Beaverton
Transportation System Plan**



**Figure 1-5
BICYCLE ACTION PLAN**

Table 1-2
Bicycle Action Plan Project Priorities

Project	From	To	Approximate Cost (\$1000's of dollars)
<i>Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers</i>			
Greenway Road bike lanes	Hall Boulevard	approx. 200 feet east of Downing	214
155 th Avenue/Weir Road bike lanes	Davis Road	Murray Boulevard	1,037
Millikan Way/160 th bike lanes	Murray Boulevard	TV Highway	454
Millikan Way/160 th bike lanes	TV Highway	Davis Road	438
125 th Avenue	Scholls Ferry Road	Brockman Road	277
Canyon Road	142 nd Avenue	91 st Avenue	1142
<i>Priority: Fill in gaps in bicycle network</i>			
Greenway/Brockman bike lanes	125 th Avenue	approx 200 ft east of 125 th Avenue	17
Hall Boulevard bike lanes	Greenway	ORE 217	311
Hall Boulevard bike lanes	12 th Street	900 ft south of Allen	134
Hall Boulevard bike lanes	Beaverton-Hillsdale Hwy	Cedar Hills Blvd	68
Watson Avenue bike lanes	Beaverton-Hillsdale Hwy	Hall Boulevard	59
Cedar Hills Boulevard bike lanes	Farmington Road	Walker Road	441
Cedar Hills Boulevard bike lanes	US 26	Foothill Drive	84
6 th Street bike lanes	Murray Boulevard	Menlo Drive	210
Murray Boulevard bike lanes (west side of Murray Boulevard)	Farmington Road	approximately 200 ft south of TV Highway	42
Denney Road bike lanes	Bel Aire Drive	Scholls Ferry Road	319
Allen Boulevard bike lanes	approximately 200 ft east of Western Avenue	Scholls Ferry Road	193
Western Avenue bike lanes	Beaverton-Hillsdale Hwy	Allen Boulevard	294
Beaverton-Hillsdale Hwy bike lanes	Western Avenue	91 st Avenue	235
91 st Avenue bike lanes	Beaverton-Hillsdale Hwy	Canyon Road	249
Old Scholls Ferry Road	Murray Boulevard	175 th Avenue	781
<i>Priority: Construct bike lanes with roadway improvement projects</i>			
125 th Avenue bike lanes	Hall Boulevard	Brockman Road	263
Farmington Road bike lanes	Murray Boulevard	172 nd Avenue	540
Farmington Road bike lanes	approximately 500 ft east of Lombard	approximately 500 ft west of Lombard	75
Walker Road bike lanes	ORE 217	Canyon Road	285
Walker Road bike lanes	Cedar Hills Boulevard	Lynnfield Lane	131
Walker Road bike lanes	178 th Avenue	185 th Avenue	270
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	79
170 th Avenue bike lanes	Rigert Road	Alexander Street	701
170 th /173 rd Avenue bike lanes	Baseline Road	Walker Road	300
170 th Avenue bike lanes	Alexander Street	Baseline/Jenkins	499
173 rd Avenue bike lanes	Walker Road	Cornell Road	323
Hart Road bike lanes	Murray Boulevard	167 th Avenue	435
Hart Road bike lanes	Hall Boulevard	Murray Boulevard	450
Hart Road/Bany Road bike lanes	167 th Avenue	170 th Avenue	60
Cornell Road bike lanes	158 th Avenue	185 th Avenue	450

Project	From	To	Approximate Cost

Murray Boulevard bike lanes	Old Scholls Ferry Road	Scholls Ferry Road	150
Oak Street/Davis Road/Allen bike lanes	Murray Boulevard	170" Avenue	420
Allen Boulevard bike lanes	ORE 217	Murray Boulevard	255
Allen Boulevard bike lanes	ORE 217	approximately 200 ft west of Western Ave	94
Nora-Beard Road bike lanes	175" Avenue	155 th Avenue	435
Weir Road	175" Avenue	155" Avenue	390
175 th Avenue-Rigert Road bike lanes	170" Avenue	ORE 210	1,028
Bicycle Action Plan Projects Total Cost:			\$14,813

TRANSIT

Currently, there are twenty bus routes which serve Beaverton. Much of the existing route structure will be modified to access and integrate light rail transit (LRT) service. The future needs include providing service to activity centers that are created by future development in Beaverton. These activity centers will have significant employment generation and will be destinations for many people.

The City provides information regarding service planning individually to Tri-Met through Tri-Met's Senior Service Planner responsible for this area and regionally to Washington County. Several public meetings were held for the Transit Choices for Livability public outreach effort in which Beaverton gave Tri-Met information for improving the transit system. Tri-Met is working on a sketch plan for proposed transit service integrating Westside Light Rail and will have preliminary sketches available for public workshops in the fall of 1997.

Tri-Met has implemented community transit pilot projects in east and southwest Beaverton. In east Beaverton, a new shuttle serves the industrial area of east Beaverton with 3,000 to 5,000 employees. This shuttle provides connections to other Tri-Met service at the Beaverton Transit Center from an area where there is currently no service. In Southwest Beaverton, a new shuttle connects SW Beaverton with the Beaverton Transit Center.⁴

The ranking of the transit strategies evaluated by the Traffic Commission and public participants follows, from most important to least important:

- Provide direct access to/from Light Rail Transit (MAX) by integration of bus services
- Provide access to commercial/employment areas
- Provide frequent service
- Provide improved transit amenities
- Provide express routes to regional employment centers
- Dial-a-ride demand responsive
- Provide Park and Ride lots
- Provide access to activity and service centers (schools, etc.)
- Provide access to regional town centers/main streets (i.e. Central Beaverton)
- Encourage enhanced local services

Due to the heavily congested arterial corridors, the City will need to coordinate with Tri-Met on the development of corridor level transit services that can help relieve congestion and forestall more expensive capital infrastructure. Fast Link or high capacity transit services on corridors such as Scholls Ferry Road, Murray Boulevard, Hall Boulevard, TV Highway, Walker Road and Allen Boulevard can link many high employment, regional center and town center areas (consistent with the draft RTP public transportation system).

⁴ Based on fax transmittal received from Dennis Grimmer, Tri-Met, September 26, 1997.

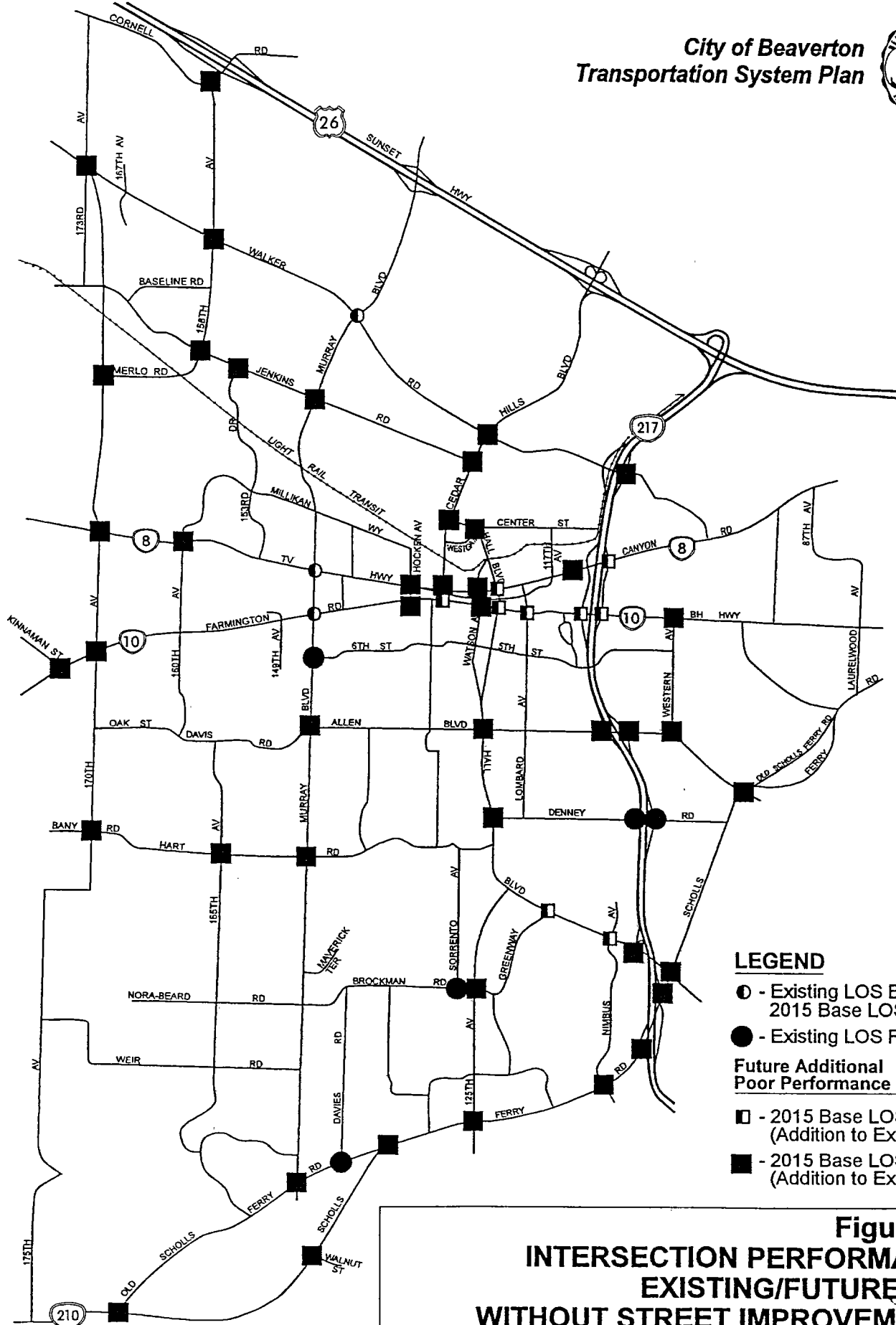
MOTOR VEHICLES

Based upon the evaluation of intersection level of service, over 62 intersections would operate at or worse than level of service (LOS) E in the 2015 evening peak hour with no improvements (Figure 1-6). This compares with four intersections operating at these levels today. The impact of future growth would be severe without significant investment in transportation improvements. Travel speeds would be below five MPH over long stretches of road (three to eight mile segments of roadways) resulting in unmanageable congestion. Poor performance on freeways and arterials would result in substantial impacts to neighborhood and collector routes. The greatest problem areas can be grouped as follows:

- **Lack of east-west capacity.** Virtually every east-west route in Beaverton from Scholls Ferry Road north to Walker Road would be over capacity.
- **Lack of north-south capacity.** ORE 217, Murray Road, Hall Boulevard, Cedar Hills Boulevard and 185th Avenue to the west all experience demands well in excess of capacity.
- **Lack of freeway crossings results in traffic concentrations at interchanges.** Throughout Beaverton there are few places to cross the freeways except at interchanges (Cabot and Fifth crossing ORE 217 are examples). This results in interchange areas not only serving high freeway access needs, but through-arterial traffic and local circulation. This results in congestion at interchanges.
- **Lack of mainline freeway capacity.** Both US 26 and ORE 217 would be over capacity without widening. This condition exists on ORE 217 over its entire length. On US 26, the imbalance between demand and capacity is most prevalent east of 185th Avenue.
- **Lack of local street system and connectivity.** Areas adjacent to 170th/185th between Farmington and Cornell and the downtown area are the best examples where all through moving traffic and much of the local access must use the arterials.
- **Lack of intersection turning capacity.** Many intersections experience LOS F conditions, not for need of through capacity, but the need for additional right or left turning capacity.
- **Lack of adequate means to cross arterials.** Traffic volume increases are such that the ability to cross or access arterial/collector routes in the future is very difficult. Traffic signal control must be planned to allow adequate control for autos, bikes and pedestrians, while not resulting in disruption caused by placing signals at low priority locations, such as private site driveways, or at locations too close to existing traffic signals.

A coordinated set of multi-modal improvements to the roadway system were developed, (outlined in Figures 1-7, and Table 1-3. Figure 1-8 summarizes the motor vehicle master plan, indicating the number of lanes to assist in identifying future right of way (ROW). Several roadway connections will be needed within neighborhood areas to reduce out of direction travel for vehicles, pedestrians and bicyclists (as outlined in Chapter 8). In preparing the functional classification map, arrows were used to indicate desired connection points and access links to arterial or collector roadways. In each case, these connections are aimed at meeting the goal of improved connectivity in the community. To protect existing neighborhoods from potential traffic impacts of extending stub end streets, connector roadways should incorporate neighborhood traffic management into their design and construction. Neighborhood traffic management devices could include speed humps, traffic circles, curvilinear street design, or other measures devised to constrain vehicle speeds and to discourage non-neighborhood through traffic.

**City of Beaverton
Transportation System Plan**



LEGEND

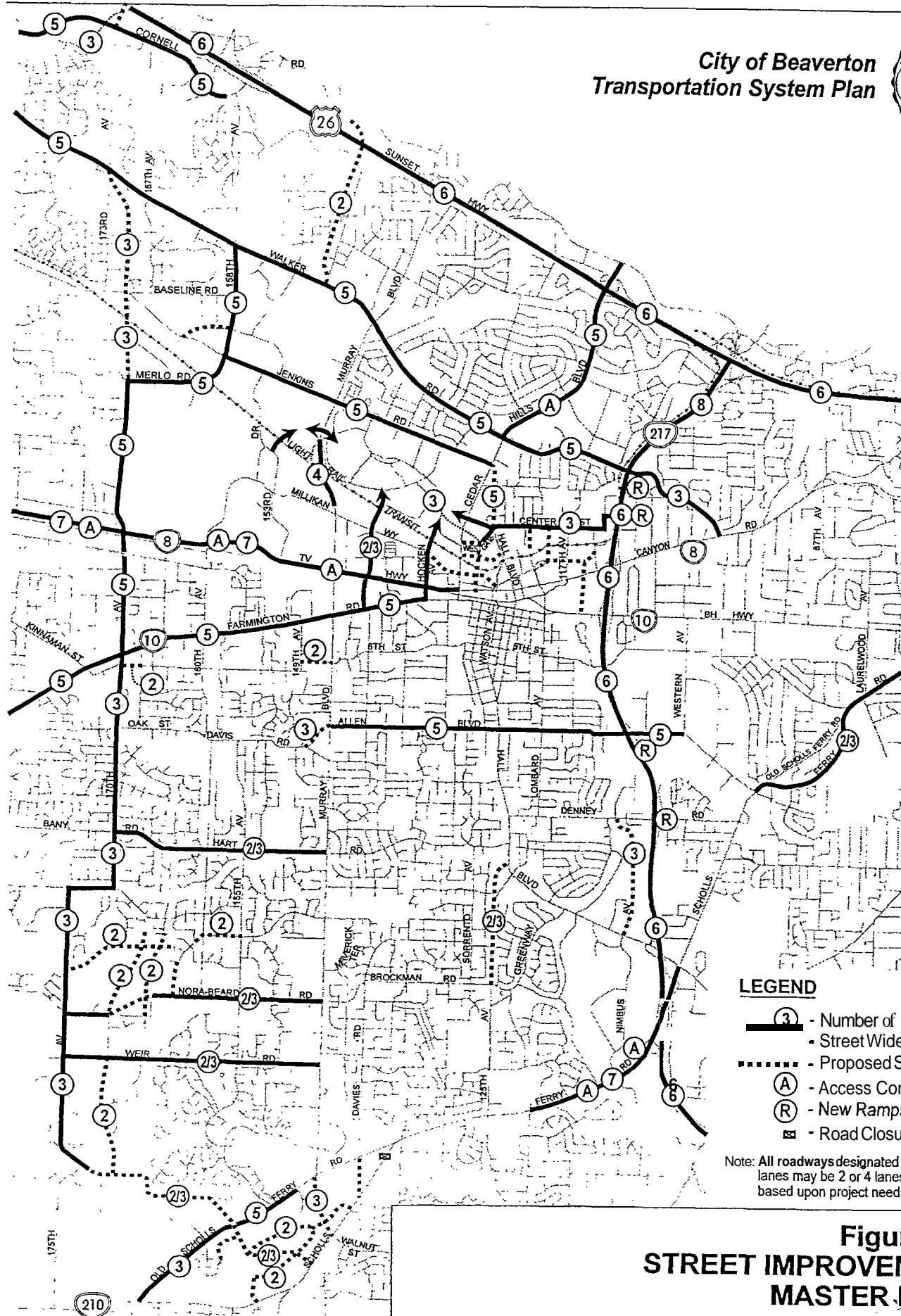
- - Existing LOS E/
2015 Base LOS F
- - Existing LOS F

**Future Additional
Poor Performance Locations:**

- - 2015 Base LOS E
(Addition to Existing)
- - 2015 Base LOS F
(Addition to Existing)

**Figure 1-6
INTERSECTION PERFORMANCE
EXISTING/FUTURE 2015
WITHOUT STREET IMPROVEMENTS**

**City of Beaverton
Transportation System Plan**



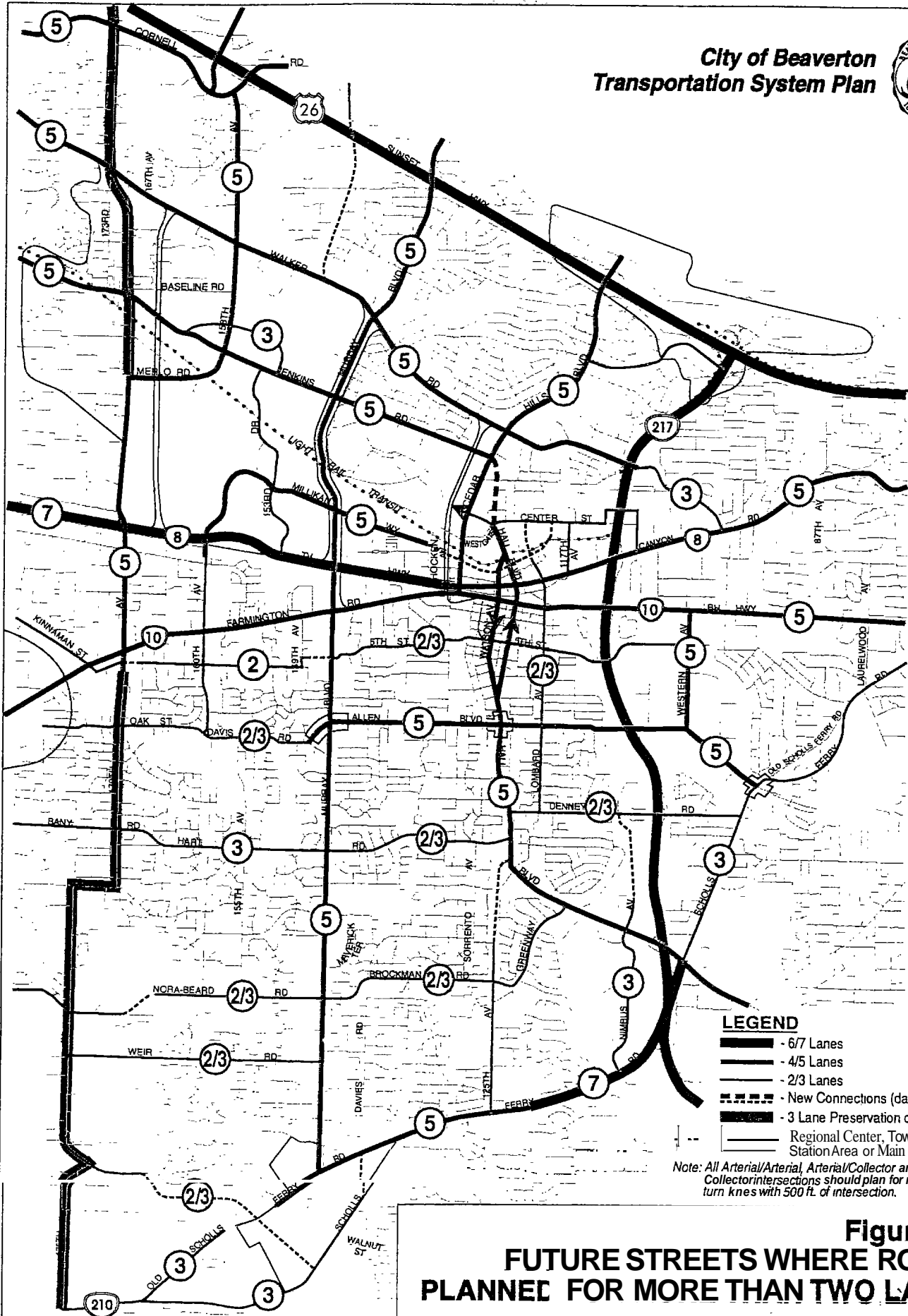
LEGEND

- (3)** - Number of Lanes
- Street Widening
- Proposed Street
- (A)** - Access Control Strategy
- (R)** - New Ramps
- - Road Closure

Note: All roadways designated with 3 or 5 lanes may be 2 or 4 lanes (respectively), based upon project needs.

**Figure 1-7
STREET IMPROVEMENT
MASTER PLAN**

**City of Beaverton
Transportation System Plan**



**Figure 1-8
FUTURE STREETS WHERE ROW IS
PLANNED FOR MORE THAN TWO LANES**

Roadway/Intersection	Improvement	Jurisdiction	cost
Project Included in the RTP/MSTIP/STIP/CIP Funding Programs			
Farmington Road	Widen to 5 lanes with bike lanes from Murray Boulevard to 173rd Avenue	Wash Co/ODOT	\$ 12,000,000
Farmington Road	Widen to 5 lanes with bike lanes from 173rd to 209th	ODOT	\$ 26,288,000
Scholls Ferry Road	Add turn lanes/widen/realign Scholls Ferry/Old Scholls Ferry city limits to 175th	ODOT/Wash Co	\$ 4,200,000
170th Avenue	Widen to 3 lanes with S/W and B L Rigert to Blanton to Alexander	Wash Co/MSTIP	\$ 12,400,000
170th/173rd Avenue	Construct/widen road to 3 lanes with S/W and B/L Baseline Road to Walker Road	Wash Co/MSTIP	\$ 3,100,000
Jenkins: Murray to 158th	Widen to 5 lanes MM	Wash Co.	\$ 1,700,000
Jenkins: Cedar Hills to Murray	Widen to 3 lanes MM	Wash Co.	\$ 2,800,000
Walker Rd: Murray to 185th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co	\$ 10,800,000
Cornell Road: Bethany to 179th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co	\$ 3,100,000
Murray Boulevard Overcrossing	Widen to four lanes Millikan to Terman	Wash Co.	\$ 4,700,000
Lombard: Broadway to Farmington	Realign roadway to align with segment to the north (3 lanes)	City/MSTIP	\$ 1,600,000
Davis Road	Widen road and add bike and pedestrian facilities from Allen to 170th Avenue.	City/MSTIP	\$ 4,300,000
Lombard: LRT to Center	Extend 3 lane section with sidewalks	City	\$ 1,700,000
Allen: Menlo to Main	Widen to 5 lanes	City	\$ 3,100,000
125 Avenue: Greenway to Hall	Extend 3 lane section with sidewalks	City	\$ 10,000,000
6th/Division: Murray to 149th	Extend 2 lane roadway	City	\$ 700,000
Millikan: Hocken to Cedar Hills	Extend Millikan to the east to connect to Cedar Hills at Henry Street	City/MSTIP	\$ 2,700,000
Canyon Road: ORE 217 to 117th	Provide median access control, relocate traffic signal, add turn lanes	ODOT	\$ 5,950,000
US 26: ORE 217 to Murray	Widen highway to 6 lanes and add braided ramps	ODOT	\$ 13,797,000
ORE 217: US 26 to Canyon	Widen highway and complete ramp work	ODOT	\$ 30,500,000
ORE 217: TV Hwy to 72nd	Widen highway to 6 lanes and provide auxiliary lanes to freeway	ODOT	\$ 60,000,000
Hall Boulevard at Scholls Ferry	Provide southbound right turn lane	ODOT	\$ 250,000
Murray Boulevard	Traffic signal interconnect Farmington to Millikan	ODOT	\$ 35,000
SUBTOTAL OF PROJECTS IN FUNDING PROGRAMS			\$ 215,720,000
Projects NOT included in current funding programs			
US 26: 185th to Murray	Widen highway to 6 lanes, install auxiliary lanes as warranted between interchanges	ODOT	\$ 23,700,000
ORE 217: Walker/Cabot/Canyon Braid	Braid ramps between Canyon and Walker/Cabot split diamond	ODOT	\$ 20,800,000
ORE 217: Denny/Allen CD		ODOT	\$ 8,600,000
TV Highway: Cedar Hills to 185th	Widen to 7 lanes/MM	ODOT	\$ 33,200,000
TV Highway: 117th to Hillsboro	Access Control strategies to improve lane capacities	ODOT	\$ 15,000,000
Farmington: Hocken to Murray	Widen to 5 lanes/MM	ODOT/City	\$ 4,100,000

Table 1-3
Motor Vehicle Improvement List

170th: Division to Blanton	Widen to 5 lanes/MM	Wash Co	\$ 2,500,000
170th: Alexander to Merlo	Widen to 5 lanes/MM	Wash Co	\$ 2,800,000
170th: Merlo to Baseline	Widen to 3 lanes/MM	Wash Co	\$ 2,100,000
173rd: Cornell to Bronson	Build new 2/3 lane roadway with grade separation of US 26 connecting to 174th/MM	Wash Co/ODOT	\$ 14,800,000
158th/Merlo: 170th to Walker	Widen to 5 lanes/MM	City	\$ 4,000,000
Cedar Hill Blvd: Walker to US 26	Complete 5 lane roadway/MM/Access Control	Wash Co	\$ 2,100,000
143rd/Meadow: Science Park - Walker	Establish a new 2 lane roadway connection, including a grade separation of US 26/MM	Wash Co	\$ 19,900,000
Walker Road: Murray to ORE 217	Widen to 5 lanes/MM	Wash Co	\$ 26,500,000
Jenkins Road: Murray to Cedar Hills	Widen to 5 lanes/MM	Wash Co	\$ 3,800,000
Scholls Ferry: Hall to Old Scholls	Widen to 7 lanes/MM	Wash Co	\$ 15,300,000
Murray: Old Scholls to Scholls Ferry	Extend Murray south to Walnut as 3 lane road/MM	Wash Co.	\$ 3,500,000
Bany/Hart: 170th to Murray	Improve to 2-3 lanes/MM	Wash Co	\$ 3,800,000
Beard/Nora: Murray to 175th	Improve to 2-3 lanes/MM	Wash Co	\$ 6,600,000
Center: 114 to Cedar Hills	Widen to 3 lanes	City/Co	\$ 3,200,000
Allen: ORE 217 to Western	Widen to 5 lanes/MM	City	\$ 1,000,000
Allen: ORE 217 to Murray	Complete 5 lane widening/MM	City	\$ 5,400,000
Weir: Murray to 175th	Improve roadway with 3 lanes/MM	City	\$ 3,700,000
Davies: Old Scholls to Scholls Ferry	Close Scholls at Old Scholls, Extend Davies south to Scholls 3 lanes/MM	City	\$ 1,500,000
Hall north of Center	Extend new 5 lane roadway north of Center to connect with Jenkins at Cedar Hills/MM	City	\$ 11,000,000
Center: Cedar Hills to Karl Braun	Extend public roadway 3 lanes/MM	City	\$ 1,500,000
141st: Tek to Farmington	Realign and extend 2/3 lane roadway/MM	City	\$ 2,800,000
Nimbus Avenue: Hall to Denney	Extend 2/3 lane roadway/MM	City	\$ 8,300,000
Local Streets: Downtown Area	Henry Street, Rose Biggi, 114th/Griffith, Broadway extension and others per Regional Ctr	City	\$ 25,600,000
Local Streets: NW Beaverton	185th/Cornell/170th/TV Highway - add local connectivity	City	\$ 4,900,000
Local Streets: SW Beaverton	175th/Weir/155th/Sexton Mountain - add local connectivity	City	\$ 3,900,000
Local Street: Scholls	Scholls Ferry to 175th north to Alvord - add local and collector connectivity	City	\$ 6,600,000
Intersection Improvements	Addition of intersection turning lanes	City/County/State	\$ 57,175,000
Traffic Signals	Addition of 50 traffic signals per plan	City/County/State	\$ 12,500,000
SUBTOTAL OF PROJECTS NOT IN CURRENT FUNDING PROGRAMS			\$ 362,175,000
TOTAL OF MOTOR VEHICLE MASTER PLAN			\$ 577,895,000
NOTE: MM - Multi-modal improvement including sidewalks and bicycle lanes			

Functional Classification

The current functional classification of streets in Beaverton was updated to reflect on-going regional planning and the functional needs of Beaverton. Classifications of principal arterial (freeway), arterial, collector, neighborhood and local have been developed based upon connectivity, which is the best indicator of function. Figure 1-9 summarizes the functional classification recommendations.

Neighborhood Traffic Management

Neighborhood Traffic Management (NTM) is a term that has been used to describe traffic control devices typically used in residential neighborhoods to slow traffic. A number of streets in Beaverton have been identified as neighborhood routes which would be appropriate locations for potential of NTM applications. It is recommended that the City develop a NTM program. This program can build off City experience and success and be used to prioritize implementation and address issues on a systematic basis rather than a reactive basis. Most importantly, the goals and policies of this plan calls for land use development to outline impacts to neighborhoods in an attempt to have new land uses design in NTM features to avoid future problems

Trucks

Efficient truck movement plays a vital role in the economical movement of raw materials and finished products. The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety and minimizing maintenance costs of the roadway system. To accomplish this, a map of through truck routes in Beaverton has been developed. This is aimed at addressing the through movement of trucks, not the local deliveries. The objective of this route designation is to allow these routes to focus on design criteria that is "truck friendly", i.e. 12 foot travel lanes, longer access spacing, 35 foot (or larger) curb returns and pavement design that accommodates a larger share of trucks.

Maintenance

Preservation, maintenance and operation are essential to protect the City investment in transportation. The majority of current gas tax revenues are used to maintain the transportation system. With increasing road inventory and the need for greater maintenance of older facilities, protecting and expanding funds for maintenance is critical. A key concept is that pavements deteriorate 40 percent in quality in the first 75 percent of their life. However, there is a rapid acceleration of this deterioration later, so that in the next 12 percent of life, there is another 40 percent drop in quality. A pavement management system can identify pavements before this rapid deterioration starts so that preventative maintenance can be applied. These fixes are generally one-fifth to one-tenth the cost required after a pavement is 80 percent deteriorated.

City of Beaverton
Transportation System Plan



Note: Study Areas indicate connectivity recommended in the plan where precise alignment will be determined. Planned routes are alignments that have been adopted.

Note: The roadways outside of the City of Beaverton (where the City does not have jurisdiction) are functional classification recommendations. Roadways in rural areas within USRA are guides for future consideration and integration.

LEGEND

Existing Study Area

- Freeway
- Arterial
- Collector
- Neighborhood Route
- Planned Roadway
- Road Closure

Figure 1-9

DRAFT

FUNCTIONAL CLASSIFICATION PLAN

TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. The Transportation Planning Rule outlines a goal of reducing vehicle miles traveled (VMT) per capita. TDM measures, applied on a regional basis, can be an effective tool in reducing vehicle miles traveled. The strategies for transportation demand management were identified and explored working with the City's Traffic Commission, TSP Technical Advisory Committee and the public.

State, regional and county policy⁵ all call for encouraging and promoting transportation demand management. The proposed policy of this plan calls for the City to support TDM. Unlike bicycles, pedestrians and motor vehicles, implementation of this policy does not necessarily require capital infrastructure. In fact, much more of TDM is policy and management rather than concrete and asphalt. Because of this, the recommended TDM plan for Beaverton consists of the following:

- Encourage development that effectively mix land uses to reduce vehicle trip generation.
- Develop consistent conditions for land use approval that require all future employment related land use developments to agree to reduce peak hour trip making, through individual or collective TDM efforts.
- Support continued efforts by Washington County, ODOT, DEQ, Tri-Met and the Westside Transportation Alliance to develop productive TDM measures that reduce VMT and peak hour trips.
- As a capital oriented element, coordinate with ODOT and Tri-Met on the development of park-and-ride transit station or freeway interchange locations in Beaverton (these are locations proven to be successful in attracting carpool/transit use).

OTHER MODES

There are four other modes discussed in the TSP: rail, pipeline, air and water. Beaverton has no airfields. There is a heliport at the St. Vincent's Hospital used for life flight. There are not navigable waterways in Beaverton. There are some natural gas pipelines in Beaverton, but no plans were identified for expansion. All low-density rail lines within the vicinity of Beaverton are operated by Portland & Western (P&W), a sister company of Willamette & Pacific (W&P) Railroad and a subsidiary of Genesee & Wyoming Incorporated. Trains operate in the Beaverton area seven days per week at various times throughout the day. The current frequency of train traffic is not anticipated to change. However, the number of cars per train will vary and is expected to increase over time depending on the demand to transfer freight by rail. W&P and P&W are focusing on long-term growth through acquisition of existing trackage to expand existing networks that can aggressively compete with trucks.

⁵ *Transportation Planning Rule*. Section 660-12-035; Regional Transportation Policy, Metro, July 1996, page 1-39; and Washington County Transportation Plan, October 1988, page 30.

FUNDING

Funding Sources and Opportunities

There are several potential funding sources for transportation improvements. These are sources which have been used in the past by agencies in Oregon. In most cases, these funding sources are sufficient to fund transportation improvements for local communities. Due to the complexity of today's transportation projects, it is necessary to seek several avenues for funding projects. Unique or hybrid funding of projects generally will include these funding sources, combined in a new package. Table 1-4 summarizes several funding options available for transportation improvements. Examples of funding sources which generally do not provide funding for roadways include: Property Tax General Funds, Car Rental Tax, Transient Lodging Tax, Business Income Tax, Business License Tax and Communication Services Tax.

Within the Portland region, funding for major transportation projects is typically brought to a vote of the public for approval. Specific projects are outlined for use of public funds, such as the Major Streets Transportation Improvement Program (MSTIP) in Washington County or the Westside Light Rail Project. Because of the need to gain public approval for transportation funding, it is important to develop a consensus in the community which supports needed transportation improvements. That is the value of the Transportation System Plan. In most communities, where time is taken to build a consensus regarding a transportation plan, existing funding sources similar to those noted can be packaged together to address funding needs.

COSTS

Order of magnitude cost estimates were developed for the projects identified in the auto, bicycle and pedestrian elements. Costs estimates from the RTP or MSTIP projects in Beaverton were used in this study. Other projects were estimated using general unit costs for transportation improvements. Many of the project costs were been developed by Washington County, Metro or ODOT for projects in the RTP. Where the TSP identified the comparable needs, these project costs were utilized. Table 1-5 summarizes the total costs outlined in the TSP. Table 1-6 identifies the known revenue sources. Current transportation revenue for the City of Beaverton can be summarized as noted in Table 1-6. Presuming a constant funding level for 20 years, this would potentially fund less than \$300,000,000 of transportation projects (maintenance, operation, construction).⁶ There is a substantial gap between the TSP outlined funding needs and the current sources of funding (\$380 million = 280-660). The TSP outlines several methods for increasing transportation funding or seeking alternative solutions to better balance transportation costs and revenue.

⁶ Using the RTP as a guide for regional allocation of funding for transportation in Beaverton, the projects listed in the financially constrained RTP network that are in Beaverton total about \$215 million.

**Table 1-4
Potential Transportation Revenue Sources**

Type	Description
System Development Charges (SDC)	SDC's or Traffic Impact Fees have been used in Oregon and throughout the United States. The Cornerstone to development of SDC's involves two principals: 1) there must be a reasonable connection between growth generated by development and the facilities constructed to serve that growth (generally determined by level of service or connectivity); and 2) there must be a general system-wide connection between the fees collected from the development and the benefits development receives. Charges are typically developed based on a measurement of the demand that new development places on the street system and the capital costs required to meet that demand. Washington County has a traffic impact fee (TIF) which was voter approved. SDC's do not require a vote of the public.
Gas Tax	The State, cities and counties provide their basic roadway funding through a tax placed on gasoline. State gas tax is approved legislatively while local gas taxes are approved by voters. State funds are dedicated to roadway construction and maintenance, with one percent allocated to pedestrian and bicycle needs. This tax does not fall under the Measure 5 limits, because it is a pay-as-you-go user tax. Washington County has a one percent gas tax and has considered a recent ballot initiative to increase this tax.
Other Motor Vehicle Fees	The state collects truck weight mile taxes, vehicle registration fees, and license fees. These funds are pooled together with the gas tax in distributing state motor vehicle fees to local agencies. Annual motor vehicle fee allocations to Washington County amount to about \$100 million (including gas tax). Washington County is currently considering raising motor vehicle registration by \$15 per year.
Street Utility Fees	Certain cities have used street utility fees for maintenance. The fees are typically collected monthly with water or sewer bills. These funds are not for capacity improvements, but for Supporting local roadway maintenance based upon land use type and trip generation. This frees other revenue sources for capacity needs. Utility fees can be vulnerable to Measure 5 limitations, unless they include provisions for property owners to reduce or eliminate charges based on actual use.
Exactions	Frontage improvements are common examples of exaction costs passed onto developers. These have been used to build much of Beaverton's local street system. Developers of sites adjacent to unimproved roadway frontage are responsible to provide those roadway improvements. Developers of sites adjacent to improvements identified as SDC projects can be credited the value of their frontage work, which is included in the SDC project-list cost estimate.
Local Improvement Districts (LID)	LIDs provide a means for funding specific improvements that benefit a specific group of property owners. LIDs require owner/voter approval and a specific project definition. Assessments are placed against benefiting properties to pay for improvements. LIDs can be matched against other funds where a project has system wide benefit, beyond benefiting the adjacent properties. Fees are paid through property tax bills.
Special Assessments	A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking and CBD or commercial zone transportation improvements. These assessments would likely fall within the Measure 5 limitations. In Washington County, other examples of transportation assessments include MSTIP (Major Streets Transportation Improvement Program) and the local maintenance property tax levy. Both of these are property tax assessments which have been imposed through votes of the public. A regional example would be the Westside LRT where the local share of funding was voter approved as an addition to property tax.
Driveway Fees	Gresham collects a Public Street Charge and a Driveway Approach Permit Fee. These fees are project specific and vary year to year based upon development permits. These funds are used for city maintenance and operation.
Employment Taxes	Tri-Met collects a tax for transit operations in the Portland region through payroll and self employment taxes. Approximately \$120 million are collected annually in the Portland region for transit.
Oregon Special Public Works Fund	The Special Public Works Fund (SPWF) Program was created by the legislature in 1985 as an economic development element of the Oregon Lottery. The program provides grants and loan assistance to eligible municipalities. There has been limited use of these funds on urban arterials. This is commonly used on state highways (a recent example being Immediate Opportunity Funds used for the US 26/Shute interchange associated with Nike)

Table 1-5

Transportation Element	Approximate Cost
Street Improvement Projects: Currently Funded	\$215,720,000
Unfunded	\$362,175,000
Signal Coordination/ITS Systems (\$275,000/yr)	\$5,500,000
Road Maintenance (assumes 4% per year growth)	\$51,000,000
Bicycle Master Plan	\$10,730,000
Pedestrian Action Plan	\$7,100,000
Pedestrian/School Safety Program (\$10,000/yr)	\$200,000
Sidewalk Grant Program (\$50,000/yr)	\$1,000,000
Park-and-ride Expansion (1,000 spaces)	\$2,000,000
Neighborhood Traffic Management (Initial Program)	\$1,500,000
Neighborhood Traffic Management (\$75,000/yr)	\$1,500,000
TSP Support Documents (i.e. Design standard update, TSP updates, ...)	\$500,000
TDM Support (\$50,000/yr)	\$1,000,000
TWENTY YEAR TOTAL in 1997 Dollars	\$660,175,000

Table 1-6

Estimation of Available Transportation Funding From Existing Sources

1997 Dollars (approximate)

Source	Approximate Annual Revenue
State Motor Vehicle Fees to City	\$3,000,000
Beaverton Tax Base Allocated by Signals/NTM	\$775,000
County Gas Tax to City	\$250,000
TIF to City	\$1,200,000
Miscellaneous	\$250,000
MSTIP to City (approximate)	\$2,500,000
State/Federal Fees use in City (approximate, assumes 35% of allocation used for capital)	\$6,000,000
Annual TOTAL	\$14,000,000
20 YEARS OF CURRENT FUNDING	\$280,000,000